

New Species of *Opius* (Hymenoptera: Braconidae)

By D. T. FULLAWAY

As a result of further searching for fruit fly parasites in hitherto unworked territory, two undescribed species of *Opius* have recently come to our attention; their descriptions follow. The types of these two species will be deposited in the U. S. National Museum.

Opius angaleti n.sp.

Female—Length 4 mm., smooth and shining, sparsely clothed with silvery hairs; particolored, the head and thorax to the metathorax (including fore legs except tips of tarsi) ferruginous, propodeum and abdomen black, sparsely punctuate with microscopically fine setigerous punctuations, face especially closely beset; eyes, ocellar space, antennae, mandibles apically, mid and hind legs, sheaths of ovipositor also black.

Head transverse, more than twice as wide as long viewed from above, wide between the eyes, which are short-oval and convex; ocelli near the middle of the vertex arranged in the form of an obtuse triangle and with a depression on the outer face, distance between the lateral members greater than the distance between the lateral and anterior member, distance between the lateral members and the inner margin of the eye about one and three-fourths times that between the centers of the lateral members; antennae longer than the body, inserted on the frons not too far apart (not much further removed from eye than from each other), the sockets deep with elevated rim; 48-segmented, scape and pedicel stout, the flagellum filamentous; face a little wider than long, slightly bulged in the middle, clypeus rather indistinctly separated, with anterior margin only slightly convex, hind margin curved to semicircular form but only the pits and groove in front well-marked; cheeks fairly wide, mandibles stout, curved and apically toothed, base nearly as wide as distance to margin of eye, temples receding.

Thorax robust, half again as long as deep or wide, and as wide as the head, sides of the pronotum deeply sulcate, mesothoracic scutum convex with deep parapsidal furrows converging and uniting in a short and rather wide fovea which extends almost to the posterior margin of the mesoscutum; transverse prescutellar sulcus fairly wide and deep and divided by a median costa, each half is further subdivided by two very weak costae; scutellum triangular, slightly convex on top and declivous at the sides, the deep depression here with a smooth unstriated surface, metanotum a transverse band with front and hind margins carinate, a partially costate furrow lying between on either side of a median knob or button; propodeum transverse, twice as wide as long, convex, with sloping sides and a median longitudinal carina on either side of which the polished surface is strongly pitted or wrinkled as far as the lateral margin and quite hairy; stigmata small and round; mesopleura marked with a costate groove anteriorly and a foveate depression posteriorly, at about the middle depth; metapleura convex, smooth and shining, sparsely punctuate above, hairy below.

Abdomen elongate-ovate, as long as the head and thorax together, somewhat compressed apically, the sides anteriorly collapsed, smooth and polished throughout save for some weak striation on the apical half of 1st tergite and basal half of the 2nd; 1st tergite one and one-half times as long as apically wide, the apical width about one and one-half times the basal; between the strong sublateral carinae the base is deeply hollowed; 2nd tergite transverse, one and one-half times as wide as long, separated from first by a deep sulcus which is incomplete laterally and is broken medially by a knob-like extension of the anterior margin; the sides are discolored, from black to a pale straw-yellow; following five tergites indistinctly marked and only discerned by the transverse line of silvery hairs near the posterior margins; ovipositor exerted and longer than the entire insect body. Legs rather slender, the hind pair a little longer and thicker than preceding. Wings slightly dusky, stigma and veins black, radius in anterior wing arising near the middle of the stigma, which is lanceolate, 1st abscissa hardly half

stigma's width in length, 2nd abscissa three times as long as first, but not as long as first intercubitus; first cubital cell is pedicellate, and second, with base one and one-half times top, is five-sided; recurrent nervure is not quite as long as first intercubitus or second abscissa of radius; nervulus in front wing is post-furcal; nervus parallelus intersecting below the middle on median; post-nervellus present in hind wing.

Male—Similar to female in all but sexual characteristics.

Described from 8 female and 17 male specimens (type, allotype and paratypes) reared from fruit fly pupae collected in North Borneo by G. W. Angalet (for whom the species is named) in March and April 1951.

***Opius hageni* n.sp.**

Female—Length 3.5 mm., smooth and shining, sparsely clothed with silvery hairs; particolored, the head, thorax and anterior part of abdomen (1st segment entirely and 2nd partly, that is, middle portion of tergite) testaceous-ferruginous, basal segments of antennae, legs (except the hind tibiae which are dusky) also testaceous-ferruginous; remainder of abdomen black; eyes, flagella of antennae apically, tips of mandibles and tarsi and sheaths of ovipositor, except middle portion, also black or blackish; sparsely punctuate with microscopically fine setigerous punctuations, face especially closely beset.

Head transverse, more than twice as wide as long, viewed from above, wide between the eyes, which are short-oval and convex, ocelli near the middle of the vertex, arranged in the form of an obtuse triangle and with a slight depression on the outer face, distance between the lateral members twice that between the lateral and anterior member, distance between the lateral member and the inner margin of the eye about one and one-fourth times that between the centers of the lateral members; antennae longer than the body, inserted on the frons not too far apart (about the same distance apart as to eye margin), the sockets deep with elevated rim, 47-segmented, scape and pedicel stout, the flagellum filamentous, face a little wider than long, slightly bulged in the middle, clypeus rather indistinctly separated with anterior margin only slightly convexly curved, hind margin curved to semicircular form but only the pits and groove in front well marked, cheeks fairly wide, mandibles stout, curved and apically toothed, width of base less than distance to margin of eye, temples receding.

Thorax robust, half again as long as deep or wide and as wide as the head, sides of the pronotum deeply sulcate, mesothoracic scutum convex with deep parapsidal furrows converging and uniting in a short and rather wide fovea which extends almost to the posterior margin of the mesoscutum, transverse prescutellar sulcus fairly wide and deep and divided by a median costa, scutellum triangular, slightly convex on top and declivous at the sides, the deep depression here with a smooth unstriated surface and a line of small pits on the posterior margin, metanotum a transverse band with front and hind margins carinate, a partially costate furrow lying between on either side of a median knob or button, propodeum transverse, twice as wide as long, convex with sloping sides and a median longitudinal carina stemming a pentagonal areola, the base of which coincides with posterior margin; on either side the surface is strongly pitted or wrinkled as far as the lateral margin; stigmata small and round; mesopleura marked with a costate groove anteriorly and a foveate depression posteriorly at about the middle depth; metapleura convex, smooth and shining, with a wide costate furrow above, hairy below.

Abdomen elongate-ovate, as long as the head and thorax together, somewhat compressed apically, the sides anteriorly collapsed, smooth and polished throughout; 1st tergite one and one-half times as long as apically wide, the apical width about one and one-fourth the basal; between the strong sublateral carinae the base is deeply hollowed, apically ligulate, side pieces depressed; separated from the following tergites, which are indistinctly marked, by a deep sulcus which is incomplete laterally and is broken medially by a knob-like extension of the anterior margin of 2nd tergite; tergites 3-6 inclusive have a transverse line of silvery hairs near posterior margins; ovipositor exerted and longer than the entire insect body; legs rather slender, the hind pair a little longer and thicker than preceding pairs. Wings strongly infumate, the stigma and veins black, radius in anterior wing arising before the middle of the stigma, which is fairly wide, the first abscissa hardly half stigma's width in length, 2nd abscissa three times as long as 1st but not as long as 1st intercubitus; 1st cubital cell is pedicellate, and 2nd with

base one and one-half times top, is five-sided; recurrent nervure is not quite as long as 1st intercubitus or 2nd abscissa of radius; nervulus in front wing is postfurcal; nervus parallelus intersecting below the middle on median; post-nervellus present in hind wing.

Male—Similar to female in all but sexual characteristics.

Described from 8 female and 8 male specimens (type, allotype and paratypes) reared from *Dacus passiflorae* (Froggatt) in *Ochrosia* fruits collected at Ndeumba, Viti Levu, Fiji, May, 1951, by N. L. H. Krauss.

This species is believed to be the parasite of *Chaetodacus passiflorae* Froggatt noted by H. W. Simmonds ("Fruit Fly Investigations, 1935." Bull. 19, Dept. of Agr., Fiji, 1936; p. 10 and Plate 4, Fig. c) as *Biosteres* sp. *Opius hageni* is named for Kenneth S. Hagen of the Department of Entomology, University of California staff, who had a prominent part in the oriental fruit fly investigations in Hawaii in 1950-51.

***Opius vandenboschi* new name**

Biosteres javanus Fullaway, 1920, Proc. Hawaiian Ent. Soc., 4:260, preoccupied.

Biosteres javanus Fullaway, 1920, is preoccupied by *Opius javanus* Szépligeti, 1908 (Leiden, Notes Mus., 29:231). *Biosteres* and *Diachasma* are both synonyms of *Opius*, according to Gahan (Proc. U. S. Nat. Mus., 49:63, 1915). For a time I considered that my *B. javanus* might be *Biosteres persulcatus* Silvestri, but now I am convinced that it is a distinct species. A name for this species is desirable because of the considerable information already published on it by Hawaiian workers under such make-shift designations as "near *persulcatus*" and "presumably *persulcatus*," and because of future studies which may be made on this important species. The specific name *Opius vandenboschi* is hereby proposed to replace *Opius javanus* (Fullaway), 1920. The species is dedicated to Dr. Robert van den Bosch, whose investigations have contributed greatly to the clarification of the relationships of the closely allied forms of the *persulcatus* group of *Opius*.